



DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

49 CFR Part 393

[Docket No. FMCSA-2021-0037]

RIN 2126-AC42

Parts and Accessories Necessary for Safe Operation; Authorized Windshield Area for the Installation of Vehicle Safety Technology

AGENCY: Federal Motor Carrier Safety Administration (FMCSA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: FMCSA amends the Federal Motor Carrier Safety Regulations (FMCSRs) to increase the area on the interior of commercial motor vehicle (CMV) windshields where certain vehicle safety technology devices may be mounted. In addition, FMCSA adds items to the definition of *vehicle safety technology*. This final rule responds to a rulemaking petition from Daimler Trucks North America (DTNA).

DATES: Effective [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

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SUPPLEMENTARY INFORMATION:

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I. AVAILABILITY OF RULEMAKING DOCUMENTS

To view any documents mentioned as being available in the docket, go to <https://www.regulations.gov/docket/FMCSA-2021-0037/document> and choose the document to review. To view comments, click this final rule, then click “Browse Comments.” If you do not have access to the internet, you may view the docket online by visiting Dockets Operations at U.S. Department of Transportation, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590-0001, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. To be sure someone is there to help you, please call (202) 366-9317 or (202) 366-9826 before visiting Dockets Operations.

II. EXECUTIVE SUMMARY

- A. Purpose and Summary of the Regulatory Action

Section 393.60(e)(1)(i) of the FMCSRs prohibits obstruction of the driver’s field of view by devices mounted at the top of the windshield. Antennas and similar devices must not be mounted more than 152 mm (6 inches) below the upper edge of the windshield and must be outside the driver’s sight lines to the road and highway signs and signals.

Section 393.60(e)(1)(i) does not apply to vehicle safety technologies, as defined in § 393.5, that include “a fleet-related incident management system, performance or behavior management system, speed management system, forward collision warning or mitigation system, active cruise control system, and transponder.”

Section 393.60(e)(1)(ii) requires devices with vehicle safety technologies to be mounted (1) not more than 100 mm (4 inches) below the upper edge of the area swept by the windshield wipers, or (2) not more than 175 mm (7 inches) above the lower edge of the area swept by the windshield wipers, and (3) outside the driver’s sight lines to the road and highway signs and signals.

The Agency modifies § 393.60(e)(1)(ii) to increase from 100 mm (4 inches) to 216 mm (8.5 inches) the distance below the upper edge of the area swept by the windshield wipers within which vehicle safety technologies may be mounted. The Agency also amends § 393.5 by revising the definition of *vehicle safety technology* to add technologies that had been granted temporary exemptions from § 393.60(e). The amendments do not impose new or more stringent requirements, but simply codify the temporary exemptions granted pursuant to 49 CFR part 381 that allow the use of the devices/technologies in locations that would previously have been a violation of § 393.60(e)(1). More importantly, the amendments do not mandate the use of any devices/technologies, but simply permit their voluntary use while mounted in a location that maximizes their effectiveness without impairing operational safety.

B. Costs and Benefits

The Agency expects that the final rule will generate cost savings for both industry and the Federal Government by reducing the overall time burden associated with the exemption request and approval process associated with 49 U.S.C. 31315(b) and the implementing regulations under 49 CFR part 381. The Agency estimates this final rule

will result in total annualized cost savings of \$10,903 at 3 percent and 7 percent discount rates, respectively.

III. ABBREVIATIONS

ANPRM	Advance Notice of Proposed Rulemaking
BLS	U.S. Bureau of Labor Statistics
CE	Categorical Exclusion
CIB	Crash Imminent Braking
CMV	Commercial Motor Vehicle
DOT	Department of Transportation
DBS	Dynamic Brake Support
DTNA	Daimler Trucks North America
ECEC	Employer Costs for Employee Compensation
ELD	Electronic Logging Devices
E.O.	Executive Order
FAST Act	Fixing America's Surface Transportation Act
FMCSA	Federal Motor Carrier Safety Administration
FMCSRs	Federal Motor Carrier Safety Regulations
FR	Federal Register
GS	General Schedule
GPS	Global Positioning System
NEPA	National Environmental Policy Act of 1969
NPRM	Notice of Proposed Rulemaking
OMB	Office of Management and Budget
PIA	Privacy Impact Assessment
PII	Personally Identifiable Information
Secretary	Secretary of Transportation
U.S.C.	United States Code

IV. LEGAL BASIS FOR THE RULEMAKING

This final rule is based on the authority of the Motor Carrier Act, 1935 (1935 Act), the Motor Carrier Safety Act of 1984 (1984 Act), and the Fixing America's Surface Transportation (FAST) Act.

The 1935 Act, as amended, provides that “[t]he Secretary of Transportation may prescribe requirements for—(1) qualifications and maximum hours of service of employees of, and safety of operation and equipment of, a motor carrier; and (2) qualifications and maximum hours-of-service of employees of, and standards of equipment of, a motor private carrier, when needed to promote safety of operation.” (49 U.S.C. 31502(b)).

The 1984 Act provides concurrent authority to regulate drivers, motor carriers, and vehicle equipment. It requires the Secretary to “prescribe regulations on commercial motor vehicle safety. The regulations shall prescribe minimum safety standards for commercial motor vehicles. At a minimum, the regulations shall ensure that—(1) commercial motor vehicles are maintained, equipped, loaded, and operated safely; (2) the responsibilities imposed on operators of commercial motor vehicles do not impair their ability to operate the vehicles safely; (3) the physical condition of operators of commercial motor vehicles is adequate to enable them to operate vehicles safely . . . ; (4) the operation of commercial motor vehicles does not have a deleterious effect on the physical condition of the operators; and (5) an operator of a commercial motor vehicle is not coerced by a motor carrier, shipper, receiver, or transportation intermediary to operate a commercial motor vehicle in violation of a regulation promulgated under this section, or chapter 51 or chapter 313 of this title.” (49 U.S.C. 31136(a)).

Section 5301 of the FAST Act directs FMCSA to exempt voluntary mounting of a vehicle safety technology on a windshield if that technology is likely to achieve a level of safety that is equivalent to or greater than the level of safety that would be achieved without the exemption (Pub. L. 114-94, 129 Stat. 1312, 1543, Dec. 4, 2015). Section 5301(c) also specifies that any regulatory exemption for windshield-mounted technologies in effect on the date of enactment of the FAST Act “shall be considered likely to achieve a level of safety that is equivalent to or greater than the level of safety that would be achieved absent an exemption....”

This final rule is based in part on the 1935 Act, which allows the Agency to regulate the “safety of operation and equipment” of a motor carrier and the “standards of equipment” of a motor private carrier. The requirements of 49 U.S.C. 31136(a)(1), (2), and (4) of the 1984 Act are also applicable to this rulemaking action. The Agency amends 49 CFR part 393 to allow certain safety equipment to be mounted within the area of the

windshield swept by the windshield wipers. The Agency believes that these changes will be welcomed by motor carriers and drivers alike and that coercion to violate these revised provisions, which is prohibited by § 31136(a)(5), will not be an issue. The final rule does not involve the physical condition of drivers under § 31136(a)(3).

This final rule rests in part on the intent of Congress expressed in section 5301 of the FAST Act to exempt safety equipment mounted within the swept area of windshields, provided such devices do not degrade operational safety.

FMCSA must consider the “costs and benefits” of any proposal before promulgating regulations (49 U.S.C. 31136(c)(2)(A), 31502(d)).

V. DISCUSSION OF PROPOSED RULEMAKING

A. Proposed Rulemaking

On July 6, 2021, FMCSA published in the *Federal Register* a Notice of Proposed Rulemaking (NPRM) (Docket No. FMCSA-2021-0037, 86 FR 35449) titled “Parts and Accessories Necessary for Safe Operation; Authorized Windshield Area for the Installation of Vehicle Safety Technology.” The NPRM proposed to modify 49 CFR 393.60(e) to allow certain vehicle safety technologies to be mounted on the interior of the windshield of a CMV, within a defined portion of the swept area of the windshield. The NPRM also proposed to modify the definition of *vehicle safety technology* in 49 CFR 393.5 to add technologies that had been granted temporary exemptions from § 393.60(e) since the 2016 final rule.

B. Comments and Responses

1. Responses to Questions Posed in NPRM

The comment period closed on August 5, 2021. The following 17 parties submitted comments: American Trucking Associations (ATA); Car Couriers Inc.; Daimler Trucks North America LLC (DTNA); EROAD; Fastfreight Express; Lidar Coalition; Lytx, Inc.; Motor & Equipment Manufacturers Association (MEMA);

Netradyne, Inc.; Omnitrac, LLC and SmartDrive Systems; Owner-Operator Independent Drivers Association (OOIDA); Samsara Inc.; Truck and Engine Manufacturers Association (EMA); United Motorcoach Association (UMA); ZF North America; and two private citizens.

To assist in development of the proposed regulatory revisions, the Agency requested responses to two specific questions.

Question 1: Does the definition of *vehicle safety technology* need to be expanded further to address other potential technologies and/or multifunction devices such as electronic logging devices that incorporate technologies such as Global Positioning Systems (GPS) that either require placement in the approximate middle of the CMV windshield or would benefit driver safety by not diverting the CMV driver's eyes from the road and would be subject to the positioning requirements of § 393.60(e)(1)?

Responses: Most commenters supported the proposed definition of *vehicle safety technology* from the NPRM. Some commenters added that the proposed definition does not need to be expanded further and should be finalized as written.

Some commenters stated that the proposed definition of *vehicle safety technology* provides adequate flexibility by not restricting the definition to the listed safety technology examples. DTNA requested FMCSA clarify that the list of technologies in the definition is not exclusive. DTNA stated that this clarification could be made by revising the definition of *vehicle safety technology* to read, in part, "Examples of vehicle safety technology systems and devices include, but are not limited to..." and "Vehicle safety technology includes but is not limited to..." DTNA stated that this change to the definition would clarify that the list is not all-encompassing, allow for multi-function devices, and prevent the need for exemption requests in the future for emerging technologies, while still ensuring that the covered technologies would be limited to those that have an impact on and promote vehicle safety.

Lidar Coalition proposed revising the first sentence of the definition of *vehicle safety technology* to read as follows:

Vehicle safety technology includes systems, components, and items of equipment used to assist in managing any aspect of the dynamic driving task (as defined in SAE J3016), or improve the safety of drivers, occupants, and other road users (such as pedestrians or cyclists).

Lidar Coalition stated that this revision would focus the definition on Advanced Driver Assistance System technology and broaden the potential beneficiaries of such technology to include all road users.

ATA agreed with the proposed definition and stated that FMCSA should continue to update the definition of *vehicle safety technology* in the future after evaluating new devices with sound data demonstrating safety performance at and above the current standard.

Some commenters expressed general support for adding GPS and Electronic Logging Device (ELD) systems to the definition of *vehicle safety technology*, stating that these devices enhance safety. A few commenters supported the addition of GPS devices to the definition of *vehicle safety technology* so those devices can be positioned closer to the driver's line of sight and the drivers do not need to look away from the road to view them. Some commenters stated that ELDs do not need to be mounted on windshields for the operation of the device and that such placement would cause an unnecessary distraction. A few commenters stated that GPS and ELD systems may be integrated with other devices listed in the definition of *vehicle safety technology* that could be placed on the windshield and therefore needed to be included in the definition.

The Lidar Coalition supported inclusion of lidar in the proposed definition, stating that such systems will provide multiple safety benefits when mounted on the interior of windshields.

MEMA stated that that the windshield space should be prioritized for safety systems that require a clear and clean windshield to operate, such as a forward-looking camera, and not systems that can function from other positions, such as a GPS unit.

OOIDA expressed concern that the proposed definition of *vehicle safety technology* includes some technologies that are proven to increase the likelihood of crashes or need more research to determine their effect on vehicle safety, such as speed management systems, automatic emergency braking (AEB) systems, and equipment being deployed on autonomous vehicles. OOIDA stated that FMCSA should not mandate use of these technologies.

UMA commented that some States may have adopted laws that would conflict with the proposed definition of *vehicle safety technology* and provided an example of a California law that would be in conflict with the proposed definition. The California law cited by UMA states that a GPS device “may be mounted in a seven-inch square in the lower corner of the windshield farthest removed from the driver or in a five-inch square in the lower corner of the windshield nearest to the driver” and a video event recorder “may be mounted in a seven-inch square in the lower corner of the windshield farthest removed from the driver, in a five-inch square in the lower corner of the windshield nearest to the driver and outside of an airbag deployment zone, or in a five-inch square mounted to the center uppermost portion of the interior of the windshield.” UMA requested that FMCSA ensure regulations integrate with such State laws or address the preemptive intention of the final rule.

FMCSA response:

This final rule adopts the changes proposed in the NPRM. It is consistent with the following previously issued Agency actions permitting the placement of vehicle safety technology devices on CMVs outside the driver’s sight lines to the road, and highway signs and signals: Bendix Commercial Vehicle Systems, LLC 86 FR 17877 (Apr. 6,

2021), Netradyne, Inc. 85 FR 82575 (Dec 18, 2020), J.J. Keller & Associates, Inc. 85 FR 75106 (Nov. 24, 2020), Samsara Networks, Inc. 85 FR 68409 (Oct. 28, 2020), Nauto Inc. 85 FR 64220 (Oct. 9, 2020), Lytx Inc. 85 FR 30121 (May 21, 2020), Navistar Inc. 84 FR 64952 (Nov. 25, 2019), SmartDrive System, Inc. 84 FR 15284 (Apr. 15, 2019), Daimler Trucks North America LLC 83 FR 4543 (Jan. 31, 2018), and Hino Motors Manufacturing U.S.A. 82 FR 36182 (Aug. 3, 2017). All of the temporary exemptions were granted for devices that meet the definition of *vehicle safety technologies* except for the GPS device identified in the Traditional Trucking Corp. exemption (83 FR 42552, Aug. 22, 2018). The Agency also acknowledges that many devices such as ELDs may include GPS technology. Under the final rule, any device that incorporates GPS is included in the definition of *vehicle safety technology*.

When issuing the previous exemptions, the Agency asked interested parties to provide FMCSA with any information demonstrating that motor carriers operating CMVs equipped with vehicle safety technologies are not achieving the requisite statutory level of safety. FMCSA has not received any information to that effect.

As noted in the NPRM, the proposed amendment would not require the use of any devices or technologies but would simply permit their voluntary use when mounted in a location that maximizes their effectiveness without impairing operational safety. FMCSA is unaware of any evidence showing that installation of other vehicle safety technologies mounted on the interior of the windshield has resulted in any degradation in safety.

Regarding OOIDA's concern about speed management and AEB systems, FMCSA sees no reason to remove "speed management systems" from the definition of *vehicle safety technology*. The definition has included "speed management systems" since it was originally added to 49 CFR 393.5 (81 FR 65568, Sep. 23, 2016). In the absence of data to support OOIDA's claims that these technologies are proven to increase

the likelihood of crashes or need more research to determine their effect on vehicle safety, FMCSA sees no reason to revisit those technologies inclusion in the definition. As to AEB, FMCSA notes that section 393.5 continues to include “forward collision warning or mitigation system” as one example of vehicle safety technology excepted from the windshield obstruction prohibition in section 393.60(e). While AEB was included in the definition proposed in the petition for rulemaking, section 23010 of the Infrastructure Investment and Jobs Act (Pub. L. 117-56, Nov. 15, 2021) requires the National Highway Traffic Safety Administration (NHTSA) to complete a rulemaking on AEB and FMCSA to complete a companion rulemaking. AEB technology ultimately might or might not require placement within the swept area of the windshield wipers. Under the circumstances, the Agency has decided that it would be premature to address AEB in this final rule. Additionally, the NPRM did not propose, and this final rule does not require, installation of these technologies.

States that accept Motor Carrier Safety Assistance Program (MCSAP) funds from FMCSA must adopt laws or regulations compatible with the rules in 49 CFR parts 390-397 within 3 years of the effective date of a new rule (49 CFR 350.335(a)(2)) or risk the loss of such funds. That MCSAP requirement would apply to States that have regulations on the location of safety technologies in CMV windshields inconsistent with this final rule.

Question 2: Would the proposed position of allowable vehicle safety technologies (8.5 inches below the upper and 7 inches above the lower edge of the swept area of the windshield) be sufficient for current and developing devices?

Responses: Most commenters supported the dimensions proposed in the NPRM as sufficient for current and developing devices. Some commenters stated that existing technologies have been placed within the dimensions proposed in the NPRM, under

previous exemptions, without obstructing the driver's view or causing any adverse safety impacts.

A few commenters stated that devices placed within the dimensions proposed in the NPRM could obstruct the driver's view of pedestrians, cars, and buildings. Some argued that the NPRM fails to account for drivers of different heights and that taller drivers are more likely to have their view obstructed by safety devices in the proposed areas of the windshield. Fastfreight Express provided pictures showing how safety devices on the windshield obstructed the view of cars and buildings.

ATA stated that devices on the windshield could require more or less physical space on the windshield in the future depending on how technologies develop, but that these changes should not be incompatible with the proposal.

A few commenters stated that the proposed position of allowable vehicle safety technologies might not be sufficient for some vehicle types covered by the regulations, such as tractors with split windshields, refuse trucks, motorcoaches, over-the-road-buses, and school buses.

UMA questioned whether limiting the number of devices on the windshield is appropriate.

FMCSA response:

FMCSA has granted temporary exemptions that allow safety technologies to be placed 8.5 inches below the upper and 7 inches above the lower swept area of the windshield wipers, all without objection from commenters. FMCSA acknowledges the concerns expressed by several commenters that the sightlines of taller drivers could be obstructed by safety devices mounted high on the windshield. Drivers currently deal with a variety of visual obstructions from the seating position, including the cab's A pillars on each side of the windshield, the sun visor (when pulled down), and the external mirrors (which may be larger than the minimum size required by NHTSA). All of these

obstructions are legal, and drivers adapt by moving their upper body and head to obtain a clear sightline to their surroundings. FMCSA has received no information that these obstructions or the safety devices placed in the swept area of windshields under previously granted temporary exemptions have created visual obstructions that cannot be addressed by the driver's routine movements of the head or upper body. Regarding the UMA comment on limiting the number of devices on the windshield, the Agency has not received information from previously granted temporary exemptions that a limitation on the number of devices is necessary and therefore declines to make that change in this final rule.

VI. CHANGES FROM THE NPRM

The Agency is making one change to this final rule from the NPRM. The Agency removes “automatic emergency braking,” from the definition for *vehicle safety technology*.

VII. SECTION-BY-SECTION ANALYSIS

This section-by-section analysis describes the changes in numerical order.

A. Section 393.5 Definitions.

The definition for *vehicle safety technology* is revised by adding more examples of vehicle safety technologies to those listed in the definition.

B. Section 393.60 Glazing in specified openings.

This section is revised by replacing “100 mm (4 inches)” with “216 mm (8.5 inches)” in paragraph (e)(1)(ii)(A). Additionally, a new paragraph (e)(1)(ii)(C) is added to read “Outside the driver's sight lines to the road and highway signs and signals.”

VIII. REGULATORY ANALYSES

A. Executive Order (E.O.) 12866 (Regulatory Planning and Review), E.O. 13563 (Improving Regulation and Regulatory Review), and DOT Regulatory Policies and Procedures

FMCSA has considered the impact of this notice of rulemaking under E.O. 12866 (58 FR 51735, Oct. 4, 1993), Regulatory Planning and Review, E.O. 13563 (76 FR 3821, Jan. 21, 2011), Improving Regulation and Regulatory Review, and DOT's regulatory policies and procedures. The Office of Information and Regulatory Affairs (OIRA) determined that this rulemaking is not a significant regulatory action under section 3(f) of E.O. 12866, as supplemented by E.O. 13563, and does not require an assessment of potential costs and benefits under section 6(a)(3) of that Order. Accordingly, the Office of Management and Budget (OMB) has not reviewed it under that E.O.

As stated previously under our discussion of public comments, we received 17 comments. Thirteen of these comments supported increasing the area within which certain vehicle safety technology devices may be mounted on the interior of the CMV windshields and the Agency proposal to add items to the definition of *vehicle safety technology*.

There are two differences in this regulatory analysis from the regulatory analysis in the NPRM that have a quantified monetary impact. The NPRM used the most up-to-date wage data then available to estimate cost savings to (1) motor carrier companies that would have to file fewer periodic exemption requests, and (2) the Federal Government by reducing the volume of exemption requests to be reviewed and processed. More up-to-date wage data are now available and utilized for this final rule. Other than these two modifications, there are no substantive changes to the requirements and calculations originally proposed in the NPRM.

Baseline for the Analysis

The mounting of devices on the interior and within the swept area of the windshield is prohibited under 49 CFR 393.60(e), unless they are vehicle safety technologies. FMCSA has authority under 49 U.S.C. 31315(b) to grant exemptions from certain parts of the FMCSRs. FMCSA must publish a notice of each exemption request in

the *Federal Register* (49 CFR 381.315(a)). The Agency must provide the public an opportunity to inspect the information relevant to the application, including any safety analyses that have been conducted. The Agency must also provide an opportunity for public comment on the request. FMCSA notes that the burden associated with preparing an exemption request is not included in a currently approved information collection request (ICR), and the Agency is pursuing completion of that ICR outside of this rulemaking.

As originally enacted, 49 U.S.C. 31315(b) allowed an exemption from a regulation (and a renewal) for no longer than 2 years from its approval date. Section 5206(a)(3) of the FAST Act amended section 31315(b) to allow an exemption to be granted for no longer than 5 years and to be renewed, upon request, for subsequent periods no longer than 5 years. 49 CFR 381.300(b).

Section 393.60(e)(1)(i) of the FMCSRs prohibits the obstruction of the driver's field of view by devices mounted on the interior of the windshield. Antennas and similar devices must not be mounted more than 152 mm (6 inches) below the upper edge of the windshield, and outside the driver's sight lines to the road and highway signs and signals. Section 393.60(e)(1)(i) does not apply to vehicle safety technologies, as defined in 49 CFR 390.5, including "a fleet-related incident management system, performance or behavior management system, speed management system, lane departure warning system, forward collision warning or mitigation system, active cruise control system, and transponder." Section 393.60(e)(1)(ii) requires devices with vehicle safety technologies to be mounted (1) not more than 100 mm (4 inches) below the upper edge of the area swept by the windshield wipers, or (2) not more than 175 mm (7 inches) above the lower edge of the area swept by the windshield wipers, and outside the driver's sight lines to the road and highway signs and signals.

This final rule revises 49 CFR 393.60 to expand the area where vehicle safety technologies (e.g., lane departure warning systems, forward collision warning or mitigation systems, active cruise control systems, and transponders) may be installed on the interior of windshields of CMVs. The final rule will generate cost savings for both industry and government and will achieve a level of safety equivalent to, or greater than, the level achieved by the current regulation.

In table 1, we show a summary of the impacts of the final rule. As a result of the previously discussed changes between this regulatory analysis and the NPRM, the projected cost savings to industry and the Federal government have increased. The annualized and 10-year cost savings to industry, both discounted 7 percent, increased approximately 9 percent from the NPRM estimates of \$568 and \$3,992 to \$621 and \$4,361, respectively. The annualized and 10-year cost savings to the Federal government, both discounted 7 percent, increased approximately 1 percent, from the NPRM estimates of \$10,137 and \$71,197 to \$10,282 and \$72,214, respectively. As a result, the aggregated annual and 10-year cost savings for both the private sector and the Federal government, discounted at 7 percent, increased approximately 2 percent, from \$10,705 and \$75,189 to \$10,903 and \$76,575, respectively.

Table 1: Summary of the impacts of this final rule

Category	Summary
Applicability	Revisions to 49 CFR 393.60 to expand the area where vehicle safety technologies may be installed on the interior windshield of CMVs
Affected Population	Potentially, all CMVs, as defined in 49 CFR 390.5
Costs	There will be no costs to industry or the Federal Government
Industry Costs Savings (\$, 7 percent discount rate)	10-year: \$4,361 Annualized: \$621
Federal Government Cost Savings (\$, 7 percent discount rate)	10-year: \$72,214 Annualized: \$10,282

Total Cost Savings (\$, 7 percent discount rate)	10-year: \$76,575 Annualized: \$10,903
Benefits	This final rule will provide a greater available area for the voluntary deployment of windshield-mounted safety technologies which have the potential to reduce fatalities, injuries, and property damages while maintaining a level of safety equivalent to, or greater than, the level achieved by the current regulation.

Cost, Cost Savings, and Benefits

This final rule makes two changes to the Parts and Accessories Necessary for Safe Operation regulations in 49 CFR part 393, subpart A and subpart D.

Under the existing § 393.5 Definitions, *vehicle safety technology* includes a fleet-related incident management system, performance or behavior management system, speed management system, lane departure warning system, forward collision warning or mitigation system, active cruise control system, and transponder. Under the final rule, this definition will also include braking warning systems, braking assist systems, driver camera systems, attention assist warning, GPS, and traffic sign recognition. Vehicle safety technology includes systems and devices that contain cameras, lidar, radar, sensors, and/or video.

As a result, vehicle safety technologies will expand to cover new devices and systems and better accommodate the advanced driver assistance technologies. The change will have no cost. Benefits will accrue through improved safety performance of CMVs via prevention or reduction of fatalities, injuries, and property damage. For example, lane departure warning systems are anticipated to prevent accidents involving striking a car in an adjoining lane, which could either involve “sideswiping” a vehicle traveling in the same direction or hitting a vehicle traveling in the opposite direction. Section 393.60(e)(1)(ii) notes that the prohibition on obstructions to the driver’s field of view in paragraph (e)(1)(i) does not apply to vehicle safety technologies, as defined in §

393.5, that are mounted on the interior of a windshield. The change to § 393.60(e)(1)(ii) expands the area available for mounting vehicle safety technologies on the interior of a windshield. Devices with vehicle safety technologies may be mounted:

- Not more than 216 mm (8.5 inches) below the upper edge of the area swept by the windshield wipers;
- Not more than 175 mm (7 inches) above the lower edge of the area swept by the windshield wipers; and
- Outside the driver's sight lines to the road and highway signs and signals.

The change will have no cost, but will result in an annualized cost savings from reduced application and exemption processing. The cost savings will be \$10,903 at both 3 percent and 7 percent discount rates.

Wage Rates

For this analysis, we calculated private sector wages using 2020 wage data from the U.S. Bureau of Labor Statistics (BLS) Occupational Employment Statistics for the Management of Companies and Enterprises (North American Industry Classification System 551100). We used a median hourly wage for Standard Occupational Classification Code 11-2021 - Marketing Managers, which is \$71.87¹

We added a load factor to the industry wages for Marketing Managers using December 2020 wage and total compensation data from the BLS Employer Costs for Employee Compensation (ECEC) survey, which accounts for employee benefits. This load factor represents the total benefits as a percentage of total salary.² We multiplied the median hourly wage by the load factor to get the full loaded wage of \$103.49.

¹ https://www.bls.gov/oes/current/naics4_551100.htm#11-0000 (last accessed Sept. 1, 2021)

² We calculate the load factor for wages by dividing total compensation by wages and salaries. For this analysis, we used BLS' ECEC/Management, professional, and related occupations. Using December 2020 data, we divided the total compensation amount of \$61.72 by the wage and salary amount of \$42.95 to get the load factor of 1.44 (\$61.72 divided by \$42.95). This data is found in table 9 of the ECEC Historical Listing. Available at <https://www.bls.gov/web/ecec/ececqrtn.pdf> (accessed Sept. 2, 2021)

We utilized Federal Government employee wage rates based on the Office of Personnel Management (OPM) 2020 General Schedule (GS) pay for the DC-MD-VA-WV-PA locality for a GS-15 grade.³ Using OPM data, we generated an hourly wage for a GS-15 Step 1 grade as \$68.38.⁴

OMB publishes an object class analysis of the budget of the U.S. Government.⁵ The object class shows that, in 2020, DOT spent \$6,602 million in full-time permanent employee compensation and \$2,590 million in civilian employee benefits. Based on this, FMCSA estimated a fringe benefit rate of 39.23 percent ($2,590/6,602$) for FMCSA personnel or \$26.82 ($\68.38×39.23 percent). The fully loaded hourly wage for a GS-15 Step 1 is \$95.20 ($\$68.38 + \26.82).

Costs

Motor carriers, industry technological manufacturers, and drivers will not incur any new costs associated with this final rule. Adopting and using windshield-mounted technologies is purely optional. Those who install and use windshield-mounted technologies will experience no added burdens or costs as a result of this rule.

In CMVs, drivers sit in an elevated position that greatly improves the forward visual field. When FMCSA previously granted exemptions, it found that doing so would likely achieve a level of safety equivalent to, or greater than, the level of safety achieved without the exemption. As described in the NPRM, since issuing the first temporary exemption from § 393.60(e)(1) in 2009, FMCSA is unaware of any crashes that have been attributed to the location of such devices.

³ <https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/salary-tables/pdf/2019/DCB.pdf>

⁴ <https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/salary-tables/pdf/2020/DCB.pdf>

⁵ <https://www.govinfo.gov/content/pkg/BUDGET-2022-OBJCLASS/pdf/BUDGET-2022-OBJCLASS.pdf>

The expanded location is expected to keep pace with technological advances and further aid in meeting the statutory requirements of the FAST Act. The expanded area is outside the driver’s line of sight to the road, highway signs, and signals.

Cost Savings

We anticipate that this final rule will generate cost savings to (1) motor carrier companies that file fewer exemption requests, and (2) the Federal government by reducing the volume of exemption requests to be reviewed and processed.

Several manufacturers of windshield-mounted technologies have requested exemptions from FMCSA. We estimate that completing each exemption request takes about 2 hours of company time. FMCSA, on average, receives three exemption applications that are impacted by this rule per year. Table 2 provides the 10-year time horizon cost savings stream based on the yearly undiscounted \$621 (rounded to the nearest whole dollar) cost savings to industry.⁶

Table 2: Total and Annualized Cost Savings to Industry⁷

YEAR	TOTAL UNDISCOUNTED COSTS SAVINGS	TOTAL DISCOUNTED	
		7 percent	3 percent
2022	\$621	\$580	\$603
2023	\$621	\$542	\$585
2024	\$621	\$507	\$568
2025	\$621	\$474	\$552
2026	\$621	\$443	\$536
2027	\$621	\$414	\$520
2028	\$621	\$387	\$505
2029	\$621	\$361	\$490
2030	\$621	\$338	\$476
2031	\$621	\$316	\$462
TOTAL	\$6,210	\$4,361	\$5,297
ANNUALIZED		\$621	\$621

⁶ Loaded Hourly wage x Number of Hours x Average number of exemptions (\$94.74 x 2 x 3).

⁷ (Total Cost Savings in this table may not equal the sum total of yearly cost savings due to rounding in underlying calculations).

Federal government employees who possess the technical knowledge required to review windshield exemption applications are senior engineers and attorneys at the GS-15 grade. A final approval letter for an exemption is granted by the Associate Administrator at the Senior Executive Service level.⁸ We estimate the total time from initial exemption receipt to final approval to be 12 non-consecutive hours. Table 3 provides the 10-year time horizon cost savings stream based on the yearly undiscounted \$10,282 (rounded to the nearest whole dollar) cost savings to the Federal government.⁹

Table 3: Total and Annualized Cost Savings to the Federal Government¹⁰

YEAR	TOTAL UNDISCOUNTED COSTS SAVINGS	TOTAL DISCOUNTED	
		7 percent	3 percent
2022	\$10,282	\$9,609	\$9,982
2023	\$10,282	\$8,980	\$9,691
2024	\$10,282	\$8,393	\$9,409
2025	\$10,282	\$7,844	\$9,135
2026	\$10,282	\$7,331	\$8,869
2027	\$10,282	\$6,851	\$8,611
2028	\$10,282	\$6,403	\$8,360
2029	\$10,282	\$5,984	\$8,116
2030	\$10,282	\$5,593	\$7,880
2031	\$10,282	\$5,227	\$7,651
TOTAL	\$102,817	\$72,214	\$87,705
ANNUALIZED		\$10,282	\$10,282

⁸ The Agency is assuming that an Associate Administrator at the Senior Executive Service level is equivalent to a GS-15 grade for the purpose of this analysis.

⁹ Loaded Hourly Wage x Number of Hours x Average number of exemptions x Personnel (\$95.20 x 12 x 3 x 3)

¹⁰ (Total Cost Savings in this table may not equal the sum total of yearly cost savings due to rounding in underlying calculations).

Table 4 provides the total 10-year time horizon cost savings stream based on the yearly undiscounted cost savings of \$10,903 (rounded to the nearest whole dollar) for both industry and the Federal government.

Table 4: Total Cost Savings for Industry and the Federal Government¹¹

YEAR	TOTAL UNDISCOUNTED COSTS SAVINGS	TOTAL DISCOUNTED	
		7 percent	3 percent
2022	\$10,903	\$10,189	\$10,585
2023	\$10,903	\$9,523	\$10,277
2024	\$10,903	\$8,900	\$9,977
2025	\$10,903	\$8,318	\$9,687
2026	\$10,903	\$7,773	\$9,405
2027	\$10,903	\$7,265	\$9,131
2028	\$10,903	\$6,790	\$8,865
2029	\$10,903	\$6,345	\$8,607
2030	\$10,903	\$5,930	\$8,356
2031	\$10,903	\$5,542	\$8,113
TOTAL	\$109,026	\$76,575	\$93,001
ANNUALIZED		\$10,903	\$10,903

Benefits

The Agency was unable to identify literature that quantified the benefits of increasing the allowable windshield area for the mounting of vehicle safety technologies. In the absence of such analyses, the Agency did not quantify benefits associated with the final rule, though it believes that the rule has the potential to improve the safety of CMV operations.^{12, 13} The Agency also finds that CMVs outfitted with vehicle safety technologies under current exemptions do not present an increased safety risk compared to other CMVs.

Discussion of Alternatives

¹¹ (Total Cost Savings in this table may not equal the sum total of yearly cost savings due to rounding in underlying calculations).

¹² <https://rosap.ntl.bts.gov/view/dot/4>

¹³ <https://rosap.ntl.bts.gov/view/dot/10>

When preparing this final rule, FMCSA considered two alternatives. In this section, we examine how the cost of the proposal would change with each alternative.

Alternative 1:

No Action

Applying a “no action” alternative, FMCSA would accept the status quo and not change the current exemption approval requirements. This alternative currently limits the windshield area in which new safety technologies can be mounted to not more than 100 mm (4 inches) below the upper edge of the area swept by the windshield wipers or not more than 175 mm (7 inches) above the lower edge of the area swept by the windshield wipers. This alternative does not favor innovation and technological growth, nor does it reduce the overall burden to industry of applying for, and to the Federal Government of reviewing, exemptions. This alternative would maintain the approximately \$10,903 (annualized, 7 percent discount rate) in annual costs associated with the overall exemption request and approval process.

Alternative 2:

Preferred Alternative— Revise 49 CFR 393.60 to expand the windshield area where vehicle safety technologies could be installed on CMVs and revise 49 CFR 393.5 to broaden the definition of *vehicle safety technology*.

Applying this preferred alternative, FMCSA would increase the allowable windshield area for installation of vehicle safety technologies. This would lead to an estimated \$10,705 in annual cost savings without any estimated cost increase or reduction in benefits, as this analysis shows.

B. Congressional Review Act

Pursuant to the Congressional Review Act (5 U.S.C. 801-808), OIRA designated this rule as not a “major rule,” as defined by 5 U.S.C. 804(2).¹⁴

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 et seq.), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996,¹⁵ requires Federal agencies to consider the effects of the regulatory action on small business and other small entities and to minimize any significant economic impact. The term “small entities” comprises small businesses and not-for-profit organizations that are independently owned and operated and are not dominant in their fields, and governmental jurisdictions with populations of less than 50,000 (5 U.S.C. 601(6)). Accordingly, DOT policy requires an analysis of the impact of all regulations on small entities, and mandates that agencies strive to lessen any adverse effects on these businesses.

The Agency expects that this final rule will not have a significant economic impact on small entities. The final rule will result in cost savings to industry and the Federal government.

FMCSA expects the average costs to manufacturers of windshield-mounted equipment associated with avoiding the need for exemption applications will be reduced by \$621 per year (annualized, 7 percent discount rate). We calculate that 100 percent of small equipment manufacturers impacted by this final rule will have a cost savings less than 1 percent of their annual revenue. No small governmental jurisdictions will be impacted by this final rule.

¹⁴ A “major rule” means any rule that OMB finds has resulted in or is likely to result in (a) an annual effect on the economy of \$100 million or more; a major increase in costs or prices for consumers, individual industries, Federal agencies, State agencies, local government agencies, or geographic regions; or significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic and export markets (5 U.S.C. 804(2)).

¹⁵ Pub. L. 104–121, 110 Stat. 857, (Mar. 29, 1996).

Consequently, I certify that the final action will not have a significant economic impact on a substantial number of small entities. If you think that your business, organization, or governmental jurisdiction qualifies as a small entity and that this final rule would have a significant economic impact on it, please submit a comment to the docket at the address listed in the ADDRESSES section of this preamble. In your comment, explain why you think it qualifies and how and to what degree this final rule would economically affect it.

D. Assistance for Small Entities

In accordance with section 213(a) of the Small Business Regulatory Enforcement Fairness Act of 1996,¹⁶ FMCSA wants to assist small entities in understanding this final rule so they can better evaluate its effects on themselves and participate in the rulemaking initiative. If the final rule will affect your small business, organization, or governmental jurisdiction and you have questions concerning its provisions or options for compliance, please consult the person listed under FOR FURTHER INFORMATION CONTACT.

Small businesses may send comments on the actions of Federal employees who enforce or otherwise determine compliance with Federal regulations to the Small Business Administration's Small Business and Agriculture Regulatory Enforcement Ombudsman and the Regional Small Business Regulatory Fairness Boards. The Ombudsman evaluates these actions annually and rates each agency's responsiveness to small business. If you wish to comment on actions by employees of FMCSA, call 1-888-REG-FAIR (1-888-734-3247). DOT has a policy regarding the rights of small entities to regulatory enforcement fairness and an explicit policy against retaliation for exercising these rights.

¹⁶ Pub. L. 104–121, 110 Stat. 857, (Mar. 29, 1996).

E. Unfunded Mandates Reform Act of 1995

The Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1531-1538) requires Federal agencies to assess the effects of their discretionary regulatory actions. The Act addresses actions that may result in the expenditure by a State, local, or Tribal government, in the aggregate, or by the private sector of \$170 million (which is the value equivalent of \$100 million in 1995, adjusted for inflation to 2020 levels) or more in any 1 year. Because this final rule will not result in such an expenditure, a written statement is not required. However, FMCSA does discuss the costs and benefits of this final rule in the preamble.

F. Paperwork Reduction Act

This final rule contains no new information collection requirements under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501-3520). FMCSA notes that the burden associated with preparing an exemption request is not included in a currently approved information collection request (ICR), and the Agency is pursuing completion of that ICR outside of this rulemaking.

G. E.O. 13132 (Federalism)

A rule has implications for federalism under section 1(a) of E.O. 13132 if it has “substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.” FMCSA has determined that this rule would not have substantial direct costs on or for States, nor would it limit the policymaking discretion of States. Nothing in this document preempts any State law or regulation. Therefore, this rule does not have sufficient federalism implications to warrant the preparation of a Federalism Impact Statement.

H. Privacy

The Consolidated Appropriations Act, 2005,¹⁷ requires the Agency to assess the privacy impact of a regulation that will affect the privacy of individuals. This final rule does not require the collection of personally identifiable information (PII). Because this final rule does not require the collection of PII, the Agency is not required to conduct a privacy impact assessment (PIA). Section 208 of the E-Government Act of 2002 (44 U.S.C. 3501 note) requires Federal agencies to conduct a PIA for new or substantially changed technology that collects, maintains, or disseminates information in an identifiable form. No new or substantially changed technology will collect, maintain, or disseminate such information as a result of this rule. Accordingly, FMCSA has not conducted a PIA.

In addition, the Agency submitted a Privacy Threshold Assessment to evaluate the risks and effects the rulemaking might have on collecting, storing, and sharing personally identifiable information. The DOT Privacy Office has determined that this rulemaking does not create privacy risk.

I. E.O. 13175 (Indian Tribal Governments)

This rule does not have Tribal implications under E.O. 13175, Consultation and Coordination with Indian Tribal Governments, because it does not have a substantial direct effect on one or more Indian Tribes, on the relationship between the Federal Government and Indian Tribes, or on the distribution of power and responsibilities between the Federal Government and Indian Tribes.

J. National Environmental Policy Act of 1969

FMCSA analyzed this rule pursuant to the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) and determined this action is categorically excluded from further analysis and documentation in an environmental assessment or environmental impact statement under FMCSA Order 5610.1 (69 FR 9680), Appendix 2, paragraph

¹⁷ Pub. L. 108-447, 118 Stat. 2809, 3268, note following 5 U.S.C. 552a (Dec. 4, 2014).

6.bb. The Categorical Exclusion (CE) in paragraph 6.bb. addresses regulations concerning vehicle operation safety standards (e.g., regulations requiring: certain motor carriers to use approved equipment which is required to be installed such as an ignition cut-off switch, or carried onboard, such as a fire extinguisher, and/or stricter blood alcohol concentration standards for drivers, etc.), equipment approval, and/or equipment carriage requirements (e.g., fire extinguishers and flares). The requirements in this rule are covered by this CE and the final action does not have any effect on the quality of the environment.

List of Subjects in 49 CFR Part 393

Highway safety, Motor carriers, Motor vehicle safety.

Accordingly, FMCSA amends 49 CFR chapter III, part 393 as follows:

PART 393—PARTS AND ACCESSORIES NECESSARY FOR SAFE

OPERATION

1. The authority citation for part 393 continues to read as follows:

Authority: 49 U.S.C. 31136, 31151, and 31502; sec. 1041(b) of Pub. L. 102-240, 105 Stat. 1914, 1993 (1991); sec. 5301 and 5524 of Pub. L. 114-94, 129 Stat. 1312, 1543, 1560; and 49 CFR 1.87.

2. Amend § 393.5 by revising the definition of “Vehicle safety technology” to read as follows:

§ 393.5 Definitions.

* * * * *

Vehicle safety technology. Vehicle safety technology includes systems and items of equipment to promote driver, occupant, and roadway safety. Examples of vehicle safety technology systems and devices include a fleet-related incident management system, performance or behavior management system, speed management system, lane departure warning system, forward collision warning or mitigation system, active cruise control system, transponder, braking warning system, braking assist system, driver

camera system, attention assist warning, Global Positioning Systems, and traffic sign recognition. Vehicle safety technology includes systems and devices that contain cameras, lidar, radar, sensors, and/or video.

* * * * *

3. Amend § 393.60 by revising paragraph (e)(1)(ii) to read as follows:

§ 393.60 Glazing in specified openings.

* * * * *

(e) ***

(1) * * *

(ii) Paragraph (e)(1)(i) of this section does not apply to *vehicle safety technologies*, as defined in § 393.5, that are mounted on the interior of a windshield.

Devices with vehicle safety technologies must be mounted:

(A) Not more than 216 mm (8.5 inches) below the upper edge of the area swept by the windshield wipers;

(B) Not more than 175 mm (7 inches) above the lower edge of the area swept by the windshield wipers; and

(C) Outside the driver's sight lines to the road and highway signs and signals.

* * * * *

Issued under the authority of delegation in 49 CFR 1.87.

Robin Hutcheson
Acting Administrator